

C l a i m s :

1. Method for producing a can body (2), in which method a film piece (3c) is cut from a film web (3b), and the film piece (3c) is wound on a winding mandrel (7) from its leading edge to its trailing edge and is held in a somewhat overlapping manner on the winding mandrel (7), **characterized in that** the film piece (3c) is transferred from the winding mandrel (7) to a concave inner surface (11a), and the overlapping area (14) of the interengaging film areas of the leading edge and the trailing edge are sealed with one another on the concave inner surface (11a).
2. Method according to claim 1, **characterized in that** the concave inner surface (11a) is formed on holding means (11), and that the cylindrical closed film piece (3d), subsequent to the sealing of the overlapping area (14), is brought from the concave inner surface (11a) onto a can body (2) and is engaged at least in part by at least one shrinking procedure.
3. Method according to claim 1 or 2, **characterized in that** for sealing the interengaging film areas in the overlapping area (14), a convex pressing surface (13) is pressed to the exterior against the concave inner surface (11a), while achieving a sealing pressure and a sealing temperature in the overlapping area (14), the heat needed to seal the overlapping area (14) being preferably supplied from the concave inner surface (11a), particularly from a partial surface (15a) of the concave inner surface (11a).
4. Method according to claim 3, **characterized in that** the convex pressing surface (13) is actuated by actuation means, a support being achieved during pressing at the concave inner surface (11a) and/or the the convex pressing surface (13) is broader than the overlapping area

(14) and/or is resilient and/or is of a material that is unable to form an adhering connection with the sealing layer.

- 5 5. Method according to any of claims 2 to 4, **characterized**
 in that after forming the sealing connection in the over-
 lapping area (14), the winding mandrel (7) and the hold-
 ing element (11) together with the closed film envelope
10 (3d) and subsequently the can body (2) and the holding
 element (11) together with the closed film envelope (3d)
 are moved in axial direction relative to each other so
 that the film envelope (3d) is arranged around the can
 body (2) and is brought into contact with the can body
15 (2) by a first shrinking procedure at least in an annular
 area, and is, optionally, completely shrunk to the can
 body (2) in a second shrinking procedure, preferably out-
 side the holding element (11), the heat for at least one
 shrinking procedure being preferably supplied in the form
20 of radiant heat and/or contact heat, particularly by
 means of hot air, but optionally inductively through the
 can body (2).
6. Method according to any of claims 1 to 5, **characterized**
 in that for carrying out the connection procedure, heat,
25 and optionally a pressure force, is applied at least to a
 partial area of the film piece (3d) transferred to the
 can body (2), so that a sealing connection between at
 least a partial area of the film piece (3d) and the can
 body (2) is achieved, the heat being preferably supplied
30 inductively through the can body (2), but optionally in
 the form of radiant heat and/or contact heat.
7. Device for applying a film piece (3c) to a can body (2)
 comprising at least one receiver for holding a can body
35 (19), feeding means for feeding film pieces (3c), at
 least one winding mandrel (7) onto which film pieces (3c)
 may be wound adhering thereto in such a way that their

respective leading edge and their respective trailing edge are held on the winding mandrel in somewhat overlapping relationship, and further comprising at least one sealing means (15) to be heated, **characterized in that** holding means (11) including a concave inner surface (11a) are formed and are moveable relative to the winding mandrel (7) in such a manner that at least a partial area of the film piece (3c) including the leading edge and the trailing edge of the film piece (3c) are transferable from the winding mandrel (7) to the concave inner surface (11a), a pressure surface (13) renders the interengaging film pieces of an overlapping area (14) between the leading edge and the trailing edge able to be pressed to the concave inner surface (11a), the sealing means (15) renders a sealing procedure for connecting the overlapping area (15) releasable, and the concave inner surface (11a) is moveable relative to the can body (2) so that the cylindrical closed film piece (3d) may be supplied to the can body (2) and is engageable at least in part to the can body (2) by shrinking means.

8. Device according to claim 7, **characterized in that** the convex pressure surface (13) is moveable by actuation means (7c), preferably located on the winding mandrel (7) and particularly renders a pressure force obtainable, which may prop against the concave inner surface (11a), the convex pressure surface (13) being, in particular, broader than the overlapping area (14) and/or resilient and/or is of a material that is unable to form an adhering connection with the sealing layer.

9. Device according to claim 7 or 8, **characterized in that** the sealing means (15) comprises a sealing surface (15a) to be heated, which faces the convex pressure surface at the concave inner surface (11a), to which an insulation zone (16) joins, optionally on both sides, in peripheral direction.

10. Device according to any of claims 7 to 9, **characterized in that** the device comprises at least one turning station (18a, 18b), which includes receiver means (19) for holding can bodies (2) on a circular line at equal distances, a winding mandrel (7) and holding means (11) including a concave inner surface (11a) being associated to each receiver means (19).
11. Device according to any of claims 7 to 10, **characterized in that** the at least one shrinking means for carrying out said shrinking procedure renders heat able to be supplied to at least a partial area of the film piece (3d) transferred to the can body (2), the heat being preferably supplied in the form of radiant heat and/or contact heat, but optionally inductively through the can body (2).
12. Device according to any of claims 7 to 11, **characterized in that** connection means for carrying out said connection procedure renders heat able to be supplied to at least a partial area of the film piece (3d) transferred to the can body (2), and optionally also a pressure force, so that a sealing connection is achieved between at least a partial area of the film piece (3d) and the can body (2), the heat being preferably supplied inductively through the can body (2), but optionally in the form of radiant heat and/or contact heat.
13. Can body (2) comprising a film piece (3d), said film piece (3d) extending around the periphery of the can, including at least one sealing layer (3g) wherein the interengaging film areas being sealed to each other in an overlapping area (14), and the film piece being formed as a shrinking film, while having different abilities to shrink in the two main directions, **characterized in that** the film piece (3d) engages everywhere the can body (2)

directly, and thus free of adhesive, and that the direction of greater ability to shrink extends in peripheral direction of the can body (2).

- 5 14. Can body according to claim 13, **characterized in that** the film piece (3d) is printed on its backside and comprises a sealing layer (3g) on the printed layer (3f) and/or has a thickness of less than 25 μm , preferably between 9 μm and 21 μm .
- 10 15. Can body according to claim 13 or 14, **characterized in that** the film piece (3d) extends in the bottom region of the can body (2) up to an outer annular area of the can base and/or that an external base covering is arranged on
- 15 the base in such a manner that it overlaps the film edge.
16. Method for imprinting a film web (3b), portions of which are to be arranged on containers, **characterized by** at least one printing step using the transfer method,
- 20 wherein at least one, preferably at least two, but particularly three to five, different colors is(are) transferred to a transfer surface (27) and in a single step as a transfer printing layer to one side of the film web (3b).
- 25 17. Method according to claim 16, **characterized in that** one of the film web (3b) is provided with a preprint (3f) and/or a sealing layer (3g) already prior to said printing step using a transfer method, preferably by means of
- 30 a gravure printing method, the transfer printing layer (3h) and the preprint (3f) being preferably applied to different sides of the film web (3b), wherein the preprint (3f) forms a primary coat or a basic decoration and is, in some cases, covered by a sealing layer (3g).